

FOR IMMEDIATE RELEASE

**Universiti Teknologi PETRONAS and Hitachi launch
a research hub to promote global collaboration in
Applied Brain Science for Optical Topography**



Agreement at PETRONAS Twin Towers in Malaysia

(From left: Dr Tang, Prof Fadzil, Datuk Rahim, Dr Suzuki, Dr Yamada and Dr Kudo)

Malaysia, February 14, 2017 --- Universiti Teknologi PETRONAS (UTP), Hitachi, Ltd. (Hitachi) and Hitachi Asia Ltd. (HAS) today announced that they have entered an agreement for UTP Centre for Intelligent Signal and Imaging Research (CISIR) to establish the first Optical Topography-Hub (OT-Hub) located outside of Japan to drive international joint research related to Optical Topography (OT) with technical support from Hitachi.

The CISIR OT-Hub will serve as the hub for an open innovation network - promoting joint research among universities, hospitals and companies to accelerate research in Applied Brain Science. UTP, Hitachi and HAS will collaborate with partners of the OT-Hub to solve a range of societal challenges related to medicine, education and other areas.

UTP CISIR first introduced OT technology to Malaysia in 2013, through joint research with Hitachi and HAS. OT is a technology developed by Hitachi that enables the noninvasive mapping of brain activity. It offers great potential as key enabling technology to develop solutions based on brain science as OT allows for the real-time measurement of brain function in our daily life.

The application of brain science technology in the fields of medicine, education and industry is expected to contribute to the realization of improved quality of life (QoL) through better healthcare, learning experience and social living. To attain these goals, the development and validation of new solutions, as well as validation through collaboration with research institutes and companies in various fields, are required. The technology and knowledge attained through joint research between UTP and Hitachi will be shared with other collaborators of the OT-Hub, who will then conduct open multi-center studies.

The representatives from UTP, HAS and Hitachi agreed on the CISIR OT-Hub launch at PETRONAS Twin Towers in Malaysia, yesterday.

Speaking at the event, Datuk Ir (Dr) Abdul Rahim Hashim, Vice Chancellor of UTP said that, “At UTP, we are not only committed to fundamental research, but also emphasize on translational research. We are committed to ensure that our research is impactful and beneficial to our society. UTP welcomes collaborations that would complement our research capability and strength in Applied Brain Science. The establishment of CISIR OT-Hub will assist our outreach efforts to serve the research and clinical community better, as we move towards global prominence. We are honored to have this opportunity which further signifies UTP as the leading private university in Malaysia.”

Dr. Norihiro Suzuki, Vice President, Executive Officer, and CTO of Hitachi, spoke of how “Hitachi aims to contribute to both economic growth and a high QoL as it undertakes to resolve various challenges in society through innovations in science and technology. In doing so, it is important to understand human and undertake human-centric technology development, that is, technology which enhances human well-being. The OT-Hub will serve as an integral role where expertise and knowledge in Applied Brain Science will be gathered and disseminated.”

Introduction of Hitachi’s Applied Brain Science

<http://www.hitachi.com/rd/portal/contents/research16/frtr01/index.html>

About Universiti Teknologi PETRONAS

Universiti Teknologi PETRONAS (UTP) was established in 1997 and has grown to be one of the most prominent private universities in Malaysia.

UTP offers a wide range of industry-relevant engineering, science and technology programmes at undergraduate and postgraduate levels and aims to produce well-rounded graduates with excellent leadership qualities and communication abilities.

UTP has produced more than 14,000 graduates and currently has an enrolment of over 1,200 foundation, 6,000 undergraduates and 1,200 postgraduates from more than 66 countries around the world.

The university conducts extensive research activities in collaboration with PETRONAS and other institutions and industries locally and abroad focusing on nine niche areas. They are Enhanced Oil Recovery, Carbon Dioxide Management, Deepwater Technology, Nanotechnology, Green Technology, Biomedical Technology, Hybrid Energy Systems, Intelligent Cities and Sustainable Resources.

UTP is the first and only private university to be awarded a six-star rating (the highest performance level) by Ministry of Higher Education Malaysia for its research, development and commercialization efforts.

For more information, visit www.utp.edu.my.

About UTP Centre for Intelligent Signal and Imaging Research (CISIR)

The Centre for Intelligent Signal and Imaging Research (CISIR) is one of the leading intelligent signal and imaging research clusters in Malaysia. The centre aspires to become an international centre of excellence in biomedical signal and image analysis. CISIR undertakes research and contributes to the advancement of signal and image processing techniques and implementation of embedded systems focusing in biomedical signal and image analysis. It began, as a research lab in 2000, became a university research centre in 2008 and in 2012 recognized as a UTP Centre of Excellence. In 2014, CISIR was recognized by the Ministry of Education as the National Higher Institution Centre of Excellence (HICoE) status focusing on neuro chemical imaging under biomedical image analysis as its research niche area. As National HICoE, CISIR will conduct translational research in neuro chemical imaging that includes brain pathways, mental states and imaging of cartilage. The centre will develop innovative tools for quantitative EEG analysis tool and portable diabetic retinopathy grading system. It will also establish regional and international collaborative network in neuro informatics, medical cloud for big data analytics. CISIR is headed by Prof Ir Dr Ahmad Fadzil Mohd Hani, who is also UTP Deputy Vice

Chancellor, Research & Innovation.

About Hitachi, Ltd.

Hitachi, Ltd. (TSE: 6501), headquartered in Tokyo, Japan, delivers innovations that answer society's challenges. The company's consolidated revenues for fiscal 2015 (ended March 31, 2016) totaled 10,034.3 billion yen (\$88.8 billion). The Hitachi Group is a global leader in the Social Innovation Business, and it has approximately 335,000 employees worldwide. Through collaborative creation, Hitachi is providing solutions to customers in a broad range of sectors, including Power / Energy, Industry / Distribution / Water, Urban Development, and Finance / Government & Public / Healthcare. For more information on Hitachi, please visit the company's website at <http://www.hitachi.com>.

About Hitachi Asia Ltd.

Hitachi Asia Ltd., a subsidiary of Hitachi, Ltd., is headquartered in Singapore. With offices across seven ASEAN countries – Indonesia, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam - the company is focused on its Social Innovation Business to answer society's challenges. Hitachi Asia and its subsidiary companies offer a broad range of information & telecommunication systems, power systems, social infrastructure & industrial systems, electronic systems and equipment, construction machinery, high functional materials and components, automotive systems, home appliances, financial services and others. For more information on Hitachi Asia, please visit the company's website at <http://www.hitachi.com.sg>.

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Information contained in this news release is current as of the date of the press announcement, but may be subject to change without prior notice.
